

MINISTRY OF DEFENSE BUILDING
BAGHDAD, IRAQ

SUSTAINMENT ASSESSMENT

SIGIR PA-07-102
JULY 17, 2007

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SPECIAL INSPECTOR GENERAL FOR IRAQ RECONSTRUCTION

July 17, 2007

**MEMORANDUM FOR DIRECTOR, IRAQ TRANSITION ASSISTANCE OFFICE
COMMANDING GENERAL, MULTI-NATIONAL
SECURITY TRANSITION COMMAND-IRAQ**

**SUBJECT: Report on Sustainment Assessment of the Ministry of Defense Building
Baghdad, Iraq (Report Number SIGIR PA-07-102)**

The Office of the Special Inspector General for Iraq Reconstruction is conducting a series of assessments to determine the current condition of completed projects subsequent to their transition to the Government of Iraq to determine whether the projects are likely to remain operational.

We are providing this report for your information and use. It addresses the current status of the Ministry of Defense Building located in Baghdad, Iraq and the likelihood of whether the building will remain operational. The assessment was made to provide you and other interested parties with real-time information to enable appropriate action to be taken, if warranted.

This report does not contain any negative findings. As a result, no recommendations for corrective action were made, and further management comments are not requested.

We appreciate the courtesies extended to our staff. If you have any questions, please contact Mr. Brian Flynn at brian.flynn@sigir.mil or at 914-360-0607. For public or congressional queries concerning this report, please contact SIGIR Congressional and Public Affairs at publicaffairs@sigir.mil or at (703) 428-1100.

Stuart W. Bowen, Jr.
Inspector General

Special Inspector General for Iraq Reconstruction

SIGIR PA-07-102

July 17, 2007

Ministry of Defense Building Baghdad, Iraq

Synopsis

Introduction. SIGIR initiated this project assessment as part of our continuing assessments of selected Multi-National Security Transition Command - Iraq reconstruction activities. The overall objective was to determine whether projects are operating at the capacity stated in the original contract or task order objective. We conducted this limited scope assessment in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

Per the contract, the objective of this renovation project was to renovate and improve the Ministry of Defense Headquarters complex. The contract's Statement of Work included specific requirements and stated that work should adhere to the applicable international or Iraqi code.

Project Assessment Objectives. This project assessment provides real-time relief and reconstruction project information to interested parties to enable appropriate action to be taken, when warranted. Specifically, we determined whether the project was operating at the capacity stated in the original contract. To accomplish the objective, we determined if the project was at full capability or capacity when accepted by the United States government, when transferred to Iraqi operators, and during our site inspection on 9 June 2007.

Conclusions. The original intent of the Ministry of Defense Headquarters building project was to renovate and improve the building in order to provide adequate working space for approximately 450 Ministry of Defense personnel. During our site visit, the facility appeared to operate as a fully functioning office building at a capacity in excess of 3,000 Ministry of Defense personnel. This occurred because the project design was adequate prior to construction; there was quality and detailed workmanship by the contractor, and adequate quality management oversight by the contractor and the United States government, which enforced the contract's Statement of Work in terms of construction quality and completeness.

In addition, post-turnover equipment operations and maintenance management and facility/building maintenance practices by the Ministry of Defense personnel appeared to be effective. Consequently, if the Ministry of Defense personnel continue to properly use and effectively maintain the equipment and the facility, sustained full capacity operations over the long term will likely result.

Recommendations and Management Comments. This report does not contain any negative findings or recommendations for corrective action. The Multi-National Security Transition Command-Iraq reviewed a draft of this report and had no comments or additional information.

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Introduction

Objective of the Project Assessment

The objective of this project assessment was to provide real-time relief and reconstruction project information to interested parties to enable appropriate action to be taken, when warranted. Specifically, we determined whether the project was operating at the capacity stated in the original contract. To accomplish this, we determined if the project was at full capability or capacity when accepted by the U.S. government, when it was transferred to Iraqi operators, and during our site inspection.

Pre-Site Assessment Background

Contract, Costs, and Payments

Task Order (TO) 0002 of Contract FA8903-04-D-8690 was awarded to Laguna Construction Company, Inc., on 26 March 2004. The contract was a cost-plus-fixed-fee contract in the amount of \$19,521,325. There were four modifications to TO 0002.

- Modification 1, dated 22 June 2004, corrected previous administrative errors. This modification resulted in no additional costs.
- Modification 2, dated 14 January 2005, deleted the original Statement of Work (SOW) and incorporated a SOW dated 13 September 2004. The estimated total cost of the TO, including all fees, increased to \$28,960,838.
- Modification 3, dated 16 April 2005, deleted the 13 September 2004 SOW and incorporated the revised SOW, dated 11 February 2005. The estimated total cost of the TO, including all fees, increased to \$30,485,700.
- Modification 4, dated 14 July 2005, deleted the revised SOW, dated 11 February 2005, and incorporated the revised SOW, dated 1 July 2005. The estimated total cost of the TO, including all fees, increased to \$31,465,205.

Based on information provided by the contractor, the project started in April 2004 and was completed in October 2005. By reference, Federal Acquisition Regulation (FAR) 52.246-21, Warranty of Construction clause, was incorporated into the contract and the standard one year from date of acceptance by the government construction warranty was applicable. However, the coverage period had expired by the time we conducted our assessment.

Statement of Work and Requirements

The final version of the SOW, included in Task Order Modification 4, was dated 1 July 2005. The SOW requirements included the following:

- Renovate and construct facilities and landscaping.
- Construct guard tower network for the entire Ministry of Defense (MOD) Headquarters (HQ) complex.
- Construct third floor of the MOD building.
- Construct entry control gate.
- Additional MOD gate work.

Project Objective and Pre-Construction Description

The objective of this project was to renovate and improve the MOD HQ complex, located in Baghdad, Iraq. The SOW required the contractor to identify and comply with all applicable Iraqi statutes, as well as, the International Building Code (IBC).

The MOD HQ complex is situated in the International Zone. The facility consisted of an H shaped building with entrance and exit foyers (Aerial Image 1). The original construction of this building started in 1957 and was completed in 1961. This complex received catastrophic damage from both the 2003 Joint Direct Attack Munition (JDAM) bombing barrage of Baghdad and subsequent looting (Aerial Image 2 and Site Photos 1 and 2).

The renovation project was intended to provide working space for approximately 450 MOD personnel. The facility was occupied by MOD personnel during our site assessment.



Aerial Image 1. Aerial view of MOD HQ complex



Aerial Image 2. Aerial view of 2003 JDAM bombing damage to the MOD HQ building



**Site Photos 1 and 2. Interior and exterior JDAM bomb damage to the MOD HQ building
(Photos courtesy of Laguna Construction)**

Based upon our review of the SOW and the contractor's pre-construction photographs, it appeared the renovation project was well planned and focused on high priority needs. The dilapidated condition of the MOD HQ building required the renovation of the majority of the building's interior. New construction focused on creating additional working space and consisted of the following:

- air conditioning system
- construction of the third floor
- sanitary sewer collection system
- electrical power distribution system

Project Design

The design provided to the assessment team by the contractor contained the following drawings for the MOD HQ complex building:

- architectural
- structural
- mechanical (heating, ventilation, and air conditioning [HVAC])
- electrical (electric, lighting, fire alarm, closed circuit television [CCTV], telephone)
- sanitary (water supply and sanitary)

The civil engineering drawings for the MOD HQ complex included details showing the utility distribution systems (water, sewer, electrical) for the site. The design package also included the mechanical design featuring flow diagrams and system layouts and the electrical distribution system design included flow diagrams and system layouts.

Based on our review of the design submittal, it appeared to be satisfactory for the renovation and new construction work.

Site Progress During Construction

Throughout the renovation project, the contractor provided numerous progress photographs. We reviewed and subsequently relied on selected contractor photographs to document examples of construction performance most likely completed in accordance with SOW requirements before the project was turned over to the MOD in October 2005.

Site Photos 3 and 4 document the installation of electrical wiring within the interior of the MOD building. The installation of air conditioning duct work and the construction of the third floor are captured in Site Photos 5 and 6. Finally, the progression of work on the severely damaged left wing of the MOD HQ complex is shown in Site Photos 7-9.



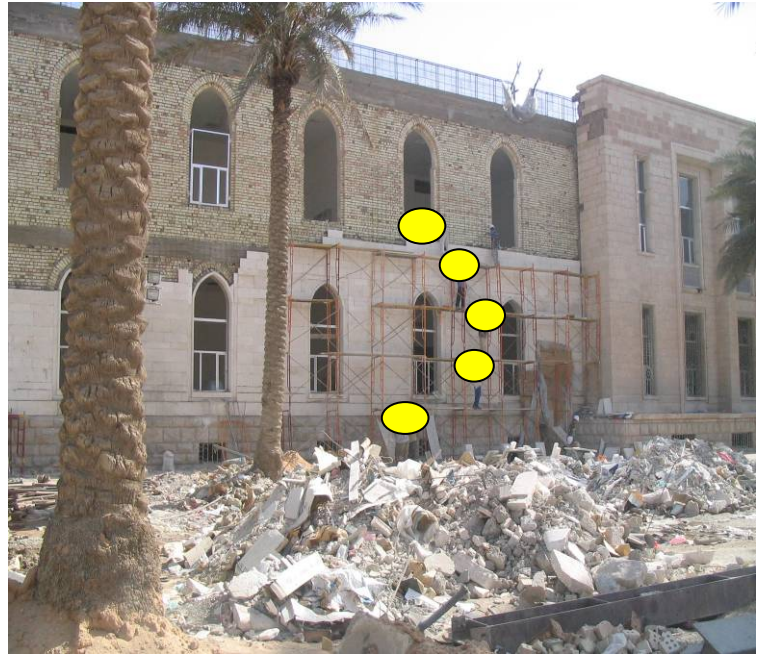
Site Photos 3 and 4. Installation of electrical wiring in the MOD HQ building (Photos courtesy of Laguna Construction)



Site Photo 5. Installation of air conditioning duct work (Photo courtesy of Laguna Construction)



Site Photo 6. Construction of the third floor (Photo courtesy of Laguna Construction)



**Site Photos 7 and 8. Early construction work on the severely damaged left wing of the MOD HQ building
(Photos courtesy of Laguna Construction)**



**Site Photo 9. Near completion of the left wing of the MOD HQ building
(Photo courtesy of Laguna Construction)**

Site Assessment

On 9 June 2007, we performed an on-site assessment of the MOD HQ complex project (Site Photo 10). We were accompanied by the Multi-National Security Transition Command –Iraq (MNSTC-I) Management Analyst, the MOD Infrastructure Advisor, and

a representative of the contractor, Laguna Construction. During our site visit, we observed MOD HQ personnel conducting day to day business within the facility.



Site Photo 10. Exterior view of the renovated MOD HQ building

General Observations

All work completed appeared to meet the SOW requirements and the facility was able to operate at full capacity. It should be noted that the original intent of the renovation project was to provide working space for approximately 450 MOD personnel; however, according to the MOD Infrastructure Advisor there are approximately 3,000 MOD personnel working at the facility.

During our site assessment, we observed that the following elements of the SOW requirements were functional and/or completed:

- All rubble and debris had been cleared and removed.
- Cooling units had been installed throughout the entire facility.
- The third floor of the MOD building had been constructed.
- Facility had been completely rewired and generators with transfer switches provided, thereby upgrading the electrical system.
- Packaged waste water treatment plant (WWTP) had been installed.
- Sewer collection system with lift station had been installed.

During our site visit, we did not detect any instances of potentially harmful electrical system tampering. Wiring improvements appeared compliant with the SOW requirements. In addition, we tested several toilets and sinks to verify they were fully operational. Interior and exterior plumbing improvements included new toilets, sinks, water heaters, and piping (Site Photos 11 and 12).

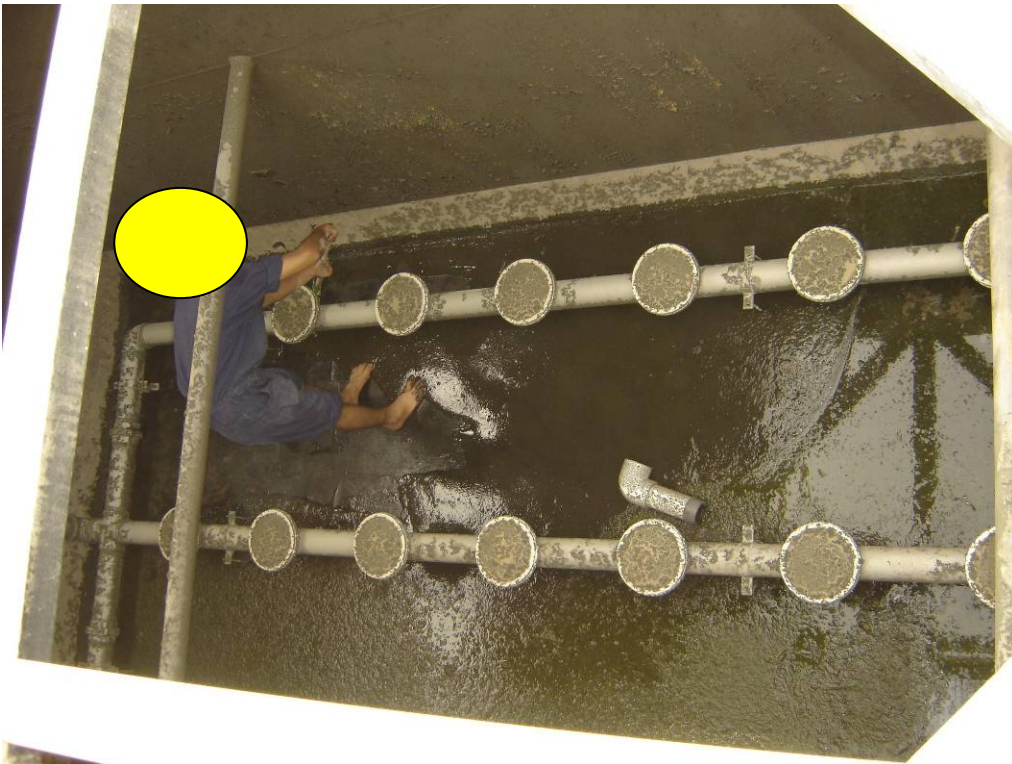


Site Photos 11 and 12. Newly installed toilets and sinks within the MOD HQ bathrooms

According to the contractor, prior to the installation of the WWTP, all waste water leaving the MOD HQ building was deposited directly into the Tigris River. In order to avoid continuing the practice of depositing untreated waste water into the Tigris River, the contractor-provided packaged WWTP appears to meet the MOD's needs in terms of total waste water volume. This packaged WWTP, located outside the MOD HQ building, captures and treats the waste water before it is discarded into the Tigris River. The design required that a wet-well collect all waste water from the entire building and a sewage lift station, with properly sized mechanical components and pipes, delivers effluent to the packaged WWTP for treatment. We inspected the installed packaged WWTP (Site Photo 13). We did not observe any abnormalities in the present operation of the WWTP nor did the WWTP exhibit any signs of malfunction. The WWTP appeared to be fulfilling its intended operational goals. According to the contractor's site photos, it appears the MOD personnel are performing adequate maintenance on the WWTP (Site Photo 14). Continual maintenance of the WWTP will prolong its life expectancy and effectiveness.



Site Photo 13. Packaged WWTP outside the MOD HQ building



Site Photo 14. MOD personnel performing routine maintenance on the packaged WWTP

We inspected the MOD HQ building's major support systems, such as lighting, data and voice communication, HVAC, water pumps, and WWTP, all of which appeared to be functioning adequately. The primary source of all MOD HQ building power is the Baghdad power grid; however, it is also supported by two 2-Megawatt (MW) generators and other lesser capacity generator sets. The contract required the refurbishment of two existing large generators, which were successfully commissioned with the required automated controls and transfer switches (Site Photo 15). At the time of our visit, the MOD HQ building was operating off of the Baghdad power grid; consequently, we were unable to observe the functioning of special controls and transfer switches that bring the generators on line. However, MOD personnel stated that the generators and transfer switch system were operational and continuously used when the Baghdad power grid was down¹.



**Site Photo 15. Contractor repositioning the refurbished two 2-MW generators
(Photo courtesy of Laguna Construction)**

During our site inspection of the MOD HQ building's interior, we observed the contractor's detailed and quality workmanship. Site Photos 16-18 document the aesthetic beauty of the contractor's interior workmanship. According to the contractor, every effort was made to retain the elegance of this former palace². An example of the contractor's attention to even the most minute detail is the ceiling tiles. For the ceilings in the hallways and office areas, any existing ceiling tiles were replaced with exact replicas. The contractor stated the reason for this was the previous ceiling tiles were inscribed with the name of Saddam Hussein; while the new replicas did not have this inscription (Site Photos 19-21).

¹During the on-site assessment, MOD representatives stated that the MOD HQ building was receiving only 2-4 hours of power per day. Therefore, the generators are running almost constantly.

² The MOD HQ building was originally built from 1957 to 1961 as a palace and then in the mid-1970s it was converted into the National Assembly building. After the 2003 overthrow of Saddam Hussein, the building was converted into the MOD HQ.

According to the contractor and MOD officials, the current usage of the building far exceeds the original intent of providing working space for approximately 450 MOD personnel. It is currently estimated that more than 3,000 MOD personnel now work in the MOD HQ building on a daily basis. However, accommodations for the additional MOD personnel were made without major disturbance to the contractor's work. For example, large ballrooms were turned into office space through the use of cubicles (Site Photo 22).



Site Photo 16. A finished interior ballroom within the MOD HQ building
(Photo courtesy of Laguna Construction)



Site Photos 17 and 18. Quality workmanship done to the interior of the MOD HQ building
(Photos courtesy of Laguna Construction)



**Site Photo 19. Installation of new ceiling tiles and fixtures
(Photo courtesy of Laguna Construction)**



Site Photo 20. Newly renovated ceiling



Site Photo 21. Ceiling tile and light fixture



Site Photo 22. Interior ballroom turned into additional office space through the use of cubicles

Conclusions

The original intent of the MOD HQ project was to renovate and improve the building in order to provide adequate working space for approximately 450 MOD personnel. During our site visit, the facility appeared to operate as a fully functioning office building at a capacity in excess of 3,000 MOD personnel. This occurred because the project design was adequate prior to construction, there was quality and detailed workmanship by the contractor, and adequate quality management oversight by the contractor and the U.S. government, which enforced the contract's SOW in terms of construction quality and completeness.

In addition, post turnover equipment operations and maintenance management and facility/building maintenance practices by the MOD personnel appeared effective. Consequently, sustained full capacity operations over the long term will likely result if the MOD personnel continue to properly use and effectively maintain the equipment and the facility.

Recommendations and Management Comments

This report does not contain any negative findings or recommendations for corrective action. The U.S. Army Corps of Engineers Gulf Region Division reviewed a draft of this report and had no comments or additional information.

Appendix A. Scope and Methodology

We performed this project assessment from February through June 2007 in accordance with the Quality Standards for Inspections issued by the President's Council on Integrity and Efficiency. The assessment team included an engineer/inspector and an auditor/inspector.

In performing this Project Assessment we:

- Reviewed contract documentation to include the following: Contract, Task Order 2, Task Order 2 Modifications, Contract documentation, and Statement of Work;
- Reviewed the design package (drawings and specifications), quality control plan, contractor's quality control reports, construction progress photos, and turnover letters;
- Interviewed Multi-National Security Transition Command – Iraq personnel; and
- Conducted an on-site assessment and documented results at the Ministry of Defense Headquarters complex renovation project in Baghdad, Iraq.

Appendix B. Acronyms

CCTV	Closed Circuit Television
FAR	Federal Acquisition Regulations
HQ	Headquarters
HVAC	Heating, ventilation, and air conditioning
IBC	International Building Code
JDAM	Joint Direct Attack Munition
MOD	Ministry of Defense
MNSTC-I	Multi-National Security Transition Command-Iraq
MW	Megawatt
SOW	Statement of Work
TO	Task Order
WWTP	Waste Water Treatment Plant

Appendix C. Report Distribution

Department of State

Secretary of State

Senior Advisor to the Secretary and Coordinator for Iraq

Director of U.S. Foreign Assistance/Administrator, U.S. Agency for
International Development

Director, Office of Iraq Reconstruction

Assistant Secretary for Resource Management/Chief Financial Officer,
Bureau of Resource Management

U.S. Ambassador to Iraq

Director, Iraq Transition Assistance Office

Coordinator, Office of Provincial Affairs

Mission Director-Iraq, U.S. Agency for International Development

Inspector General, Department of State

Inspector General, U.S. Agency for International Development

Regional Inspector General-Iraq, U.S. Agency for International Development

Department of Defense

Secretary of Defense

Deputy Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer

Deputy Chief Financial Officer

Deputy Comptroller (Program/Budget)

Deputy Assistant Secretary of Defense-Middle East, Office of Policy/International
Security Affairs

Inspector General, Department of Defense

Director, Defense Contract Audit Agency

Director, Defense Finance and Accounting Service

Director, Defense Contract Management Agency

Department of the Army

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

Principal Deputy to the Assistant Secretary of the Army for Acquisition,
Logistics, and Technology

Deputy Assistant Secretary of the Army (Policy and Procurement)

Commanding General, Joint Contracting Command-Iraq/Afghanistan

Assistant Secretary of the Army for Financial Management and Comptroller

Chief of Engineers and Commander, U.S. Army Corps of Engineers

Commanding General, Gulf Region Division

Chief Financial Officer, U.S. Army Corps of Engineers

Auditor General of the Army

U.S. Central Command

Commanding General, Multi-National Force-Iraq

Commanding General, Multi-National Corps-Iraq

Commanding General, Multi-National Security Transition Command-Iraq

Commander, Joint Area Support Group-Central

Other Federal Government Organizations

Director, Office of Management and Budget
Comptroller General of the United States
Inspector General, Department of the Treasury
Inspector General, Department of Commerce
Inspector General, Department of Health and Human Services
President, Overseas Private Investment Corporation
President, U.S. Institute for Peace

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
Senate Committee on Armed Services
Senate Committee on Foreign Relations
 Subcommittee on International Development and Foreign Assistance, Economic Affairs, and International Environmental Protection
 Subcommittee on International Operations and Organizations, Democracy and Human Rights
 Subcommittee on Near Eastern and South and Central Asian Affairs
Senate Committee on Homeland Security and Governmental Affairs
 Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security
 Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
Permanent Subcommittee on Investigations

U.S. House of Representatives

House Committee on Appropriations
 Subcommittee on Defense
 Subcommittee on State, Foreign Operations, and Related Programs
House Committee on Armed Services
House Committee on Oversight and Government Reform
 Subcommittee on Government Management, Organization, and Procurement
 Subcommittee on National Security and Foreign Affairs
House Committee on Foreign Affairs
 Subcommittee on International Organizations, Human Rights, and Oversight
 Subcommittee on the Middle East and South Asia

Appendix D. Project Assessment Team Members

The Office of the Assistant Inspector General for Inspections, Office of the Special Inspector General for Iraq Reconstruction, prepared this report. The principal staff members who contributed to the report were:

Kevin O'Connor

Yogin Rawal, P.E.